This material covers a brief overview of two distinct COVID-19 aspects:

1. Identifying patients who are at high risk for progression to severe COVID-19, including hospitalization or death

2. Clinical symptom severity spectrum
The CDC provides a list of underlying medical conditions associated with higher risk of severe COVID-19¹

- Evidence was determined by CDC reviewers based on available literature about COVID-19
- Literature includes:
  - published reports
  - scientific articles in press
  - unreviewed pre-prints, and
  - data from CDC-led investigations
- The methods used to assess the conditions have changed during the pandemic as the amount of literature and types of studies increased
  - Initially the list was based on descriptive data
  - As the research expanded, literature was categorized by study design
- Since May 2021, the process includes a CDC-led review process that uses rigorous systematic review methods

A person with severe illness from COVID-19 is more likely to…²

- be hospitalized
- require a ventilator to help them breathe
- need intensive care
- die

### Summary of risk factors for progression to severe COVID-19

#### Older adults
- Older adults are at highest risk of getting very sick from COVID-19
- More than 81% of COVID-19 deaths occur in people over age 65 years
  - The number of deaths in those >65 years is 97 times higher than among those aged 18–29 years

#### Comorbidities
- The risk of severe COVID-19 increases as the number of underlying medical conditions a person has increases

#### Racial/ethnic minority or disabilities
- Risk increases with increase in likelihood of comorbidities, reduced healthcare access and increased likelihood of living in a congregate setting
- People with certain disabilities are more likely to get COVID-19 and have worse outcomes

#### Vaccination status
- Staying up to date with COVID-19 vaccines (getting primary series and booster) and following preventive measures for COVID-19 are especially important if you are older or have severe health conditions or more than one health condition

#### Pregnancy
- Pregnant and recently pregnant people (for at least 42 days following end of pregnancy) are more likely to get very sick from COVID-19 compared with non-pregnant people

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Underlying medical conditions* may increase likelihood for progression to severe COVID-19

An estimated 176.1 million individuals representing 75.4% of U.S. adults had at least one increased-risk condition, 40.3% ≥2 and, 18.5% ≥3 conditions

*This list was last updated on 26 February 2022, and does not include all medical conditions that place a person at higher risk of severe illness from COVID-19; ongoing reviews of additional underlying conditions are being conducted. The conditions listed are not in order of risk.

HIV, human immunodeficiency virus

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Key Findings from One Large Cross-Sectional Study
Underlying Medical Conditions and Severe Illness Among 540,667 Adults Hospitalized With COVID-19, March 2020–March 2021

COVID-19 Death Risk Ratio (RR) for Select Age Groups and Comorbid Conditions

- COVID-19 Death Risk Ratio (RR) Increase as the Number of Comorbid Conditions Increases

1. Identifying patients who are at high risk for progression to severe COVID-19, including hospitalization or death
2. Clinical symptom severity spectrum

COVID-19 Disease Course

- Infection: 5-6 days
- Symptoms: 7 days
- Severe Disease
- Recovery: 2-8 weeks
- Recovery: 3-6 weeks
- Death: 2-8 weeks

Adapted from the Report of the WHO-China Joint Mission on Coronavirus Disease 2019

*mean; † median; ‡ unknown average type

## NIH Guidelines: The COVID-19 Severity Spectrum

<table>
<thead>
<tr>
<th>Stage</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asymptomatic or pre-symptomatic</td>
<td>Positive test for SARS-CoV-2 but no symptoms</td>
</tr>
<tr>
<td>Mild illness</td>
<td>Varied symptoms (e.g., fever, cough, sore throat, malaise, headache, muscle pain) but no shortness of breath, dyspnea or abnormal imaging</td>
</tr>
<tr>
<td>Moderate illness</td>
<td>SpO₂ ≥94% and evidence of lower respiratory disease during clinical assessment or imaging</td>
</tr>
<tr>
<td>Severe illness</td>
<td>SpO₂ &lt;94%, PaO₂/FiO₂ &lt;300mmHg, respiratory rate &gt;30 breaths/min, or lung infiltrates &gt;50% on imaging</td>
</tr>
<tr>
<td>Critical illness</td>
<td>Respiratory failure, septic shock, and/or multiorgan dysfunction</td>
</tr>
</tbody>
</table>

Visit the NIH website for the most up-to-date clinical spectrum information.
Additional COVID-19 Education Resources

Pfizer Medical Portal – Infectious Disease

Explore topics such as:

- SARS-CoV-2 Viral Replication
- SARS-CoV-2 Virology
- COVID-19 Clinical Presentation
- COVID-19 Clinical Overview
- COVID-19 Testing and Diagnosis

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